Docket No.: AXI.016.P
Express Mail No.: EV393144087US

CLAIM AMENDMENTS

Please cancel claims 14-25, 41 and 42 without prejudice.

Please amend the following claims by inserting the underlined material and deleting the bracketed material:

1. (original): A method for identifying compounds that modulate a target protein, comprising:

providing cells transfected in such a way as to provide a polynucleotide sequence encoding said target under control of a heterologous inducible promoter;

inducing the promoter under conditions that provide a detectable change in a measurable parameter associated with the cells;

contacting at least a portion of the cells with a test compound to ascertain whether the test compound affects a change in the measurable parameter; and

repeating the contacting step with at least one other test compound.

2. (original): The method of Claim 1, wherein the measurable parameter is a parameter other than growth or survival.

3. (original): The method of Claim 1, wherein the contacting step comprises contacting cells with said test compound while the promoter is induced.

4. (original): The method of Claim 1, further comprising comparing the value of the measurable parameter in uninduced cells with the value of the parameter in induced cells.

5. (original): The method of Claim 4, wherein the measurable parameter has been selected from among a plurality of candidate parameters based on said comparison.

6. (original): The method of Claim 1, wherein the promoter is induced to a degree that provides a detectable change in the parameter but not to a degree that kills the cell.

7. (original): The method of Claim 1, wherein the promoter is induced by contacting the cell with an inducer molecule.

8. (original): The method of Claim 1, wherein the promoter is induced by removal or inhibition of a repressor.

9. (original): The method of Claim 1, wherein the target protein affects ion channel activity of the cell.

10. (original): The method of Claim 9, wherein the target protein is an ion channel protein.

11. (original): The method of Claim 9, further comprising:

identifying at least one test compound that modulates the measurable parameter in the cell;

providing a second cell line that differs from the first cell line in that the inducible promoter controls expression of a reporter instead of polynucleotide encoding target;

contacting the second cell line with the identified test compound; and

ascertaining whether the identified test compound affects the expression of the reporter.

12. (original): The method of Claim 1, wherein said polynucleotide encoding target and said promoter have been transfected into a mammalian cell.

13. (original): The method of Claim 1, wherein said inducible promoter replaces an endogenous promoter and controls the expression of an endogenous polynucleotide encoding target.

14.-25. (Cancelled)

26. (original): A method according to claim 26 wherein said regulatory sequence is a non-mammalian enhancer sequence or a repressor sequence.

27. (original): A method according to claim 27 wherein said non-mammalian enhancer sequence is a herpes virus enhancer or an artificial enhancer.

28. (original): A method according to claim 28 wherein said non-mammalian enhancer sequence is an inducible promoter.

29. (original): A method according to claim 29 wherein said inducible promoter is a herpes virus promoter.

30. (original): A method according to claim 29 wherein said inducible cassette further comprises a target sequence such that said target sequence is transcribed upon induction of said inducible cassette.

31. (original): A method according to claim 31 wherein said target sequence is selected from the group consisting of a G-protein coupled receptor target sequence, a nuclear hormone receptor target sequence, a cytokine receptor target sequence, a protein kinase-coupled receptor target sequence a nicotinic acetylcholine receptor target sequence, a ionotropic glutamate receptor target sequence, a glycine receptor target sequence, a gamma-aminobutyric acid receptor target sequence, and a vanilloid receptor target sequence.

32. (original): A method according to claim 32 wherein said target sequence is 5HT4.

33. (original): A method according to claim 27 wherein said repressor sequence is able to bind a zinc finger protein.

34. (original): A method according to claim 34 wherein said zinc finger protein comprises a KRAB domain.

35. (original): A method according to claim 26 wherein said regulator is VP16 or a functional domain of VP16.

36. (original): A method according to Claim 25 further comprising transfecting said cell with a regulatory expression vector construct comprising a second inducible promoter and a regulator gene encoding said regulator operably linked such that induction of said second inducible promoter by an exogenous stimulus initiates transcription of said regulator gene.

37. (original): A method according to claim 37 wherein said second inducible promoter is a tetracycline inducible promoter or an ecdysone-inducible promoter.

38. (original): A method according to claim 37 wherein said exogenous stimulus is tetracycline, ponasterone, dexamethasone, a heavy metal ion or heat.

39. (original): A method according to claim 25 wherein said step of inducing expression of said target membrane receptor is initiated by the presence or absence or a regulator or by the presence or absence of an inducer.

40. (original): A method for screening a chemical compound library to identify a G-protein coupled receptor modulator molecule, comprising:

a. obtaining a cell that conditionally expresses a G-protein coupled receptor;

b. inducing expression of said G-protein coupled receptor;

c. measuring a physiological parameter associated with said G-protein coupled receptor to obtain a first set of data;

d. incubating a potential modulator of said G-protein coupled receptor with said cell;

e. measuring said physiological parameter to obtain a second set of data; and

f. comparing said first set of data with said second set of data to determine whether said physiological parameter has been modulated, thereby identifying a chemical compound that modulates a G-protein coupled receptor.

41-42 (Cancelled).